

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Joseph Phillip Bigus et al.      Art Unit: 2762  
Serial No.: 09/100,595      Examiner: Unknown  
Filed: June 19, 1998      Atty. Docket No.: IBM/04B  
For: PROGRAM PRODUCT FOR OPTIMIZING THE PERFORMANCE OF  
COMPUTER TASKS USING INTELLIGENT AGENT WITH MULTIPLE  
PROGRAM MODULES HAVING VARIED DEGREES OF DOMAIN  
KNOWLEDGE

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**TRANSMITTAL**

Assistant Commissioner for Patents  
Washington, DC 20231

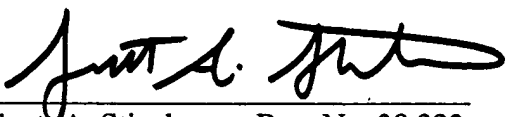
Sir:

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Transmittal (in duplicate) containing Certificate of Mailing Under 37 CFR 1.8  
Information Disclosure Statement  
Form PTO-1449 (11 pages)  
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WOOD, HERRON & EVANS, L.L.P.  
2700 Carew Tower  
Cincinnati, Ohio 45202  
(513) 241-2324

By:   
Scott A. Stinebruner Reg. No. 38,323

**CERTIFICATE OF MAILING 37 CFR 1.8**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231 on August 28, 1998.

  
Scott A. Stinebruner Reg. No. 38,323

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**INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

In accordance with Applicants' duty of disclosure under the provisions of 37 C.F.R. § 1.56, the references listed on the enclosed Form PTO-1449 are brought to the attention of the Examiner.

It is also brought to the attention of the Examiner the following co-pending U.S. Patent Applications, all filed in the name of Joseph Phillip Bigus et al.:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Title</u>	<u>Docket No.</u>
08/821,935	March 21, 1997	INTELLIGENT AGENT WITH NEGOTIATION CAPABILITY AND METHOD OF NEGOTIATION THEREWITH	IBM/02
08/822,119	March 21, 1997	APPARATUS AND METHOD FOR COMMUNICATING BETWEEN AN INTELLIGENT AGENT AND CLIENT COMPUTER PROCESS USING DISGUISED MESSAGES	IBM/03
08,826,107	March 21, 1997	APPARATUS AND METHOD FOR OPTIMIZING THE PERFORMANCE OF COMPUTER TASKS USING MULTIPLE INTELLIGENT AGENTS HAVING VARIED DEGREES OF DOMAIN KNOWLEDGE	IBM/01

Each of the references was cited in the parent for the above-identified application, U.S. Serial No. 08/822,993, filed on March 21, 1997 by Joseph Phillip Bigus et al. and entitled "APPARATUS AND METHOD FOR OPTIMIZING THE PERFORMANCE OF COMPUTER TASKS USING INTELLIGENT AGENT WITH MULTIPLE PROGRAM MODULES HAVING VARIED DEGREES OF DOMAIN KNOWLEDGE". Accordingly, no copies of the references are provided.

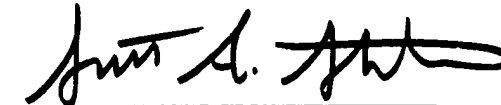
No representation is made that any of the references are "prior art" within the meaning of 35 U.S.C. § 102 or § 103. Moreover, any explanations herein are not to be taken as a representation that the references have been thoroughly reviewed. In particular, no representation as to the relative relevance of any portion of a reference is intended.

Consideration of the references and the remarks presented herein in the above-identified application is respectfully requested.

If there are any questions regarding this paper, or which might otherwise further this case onto allowance, please contact the undersigned at (513)241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

28 AUG 1998  
Date

Respectfully submitted,



Scott A. Stinebruner  
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SUBSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. IBM/048 (R0996-052L)		SERIAL NO. 09/100,595	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)				APPLICANT Joseph Phillip Bigus et al.			
(37 CFR 1.98(b))				FILING DATE June 19, 1998		GROUP 2762	

U.S. PATENT DOCUMENTS													
EXAMINER INITIAL		PATENT NUMBER							ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A.A	4	9	1	4	5	8	5	04/03/90	Packard et al.	364	200	05/23/88
	A.B	5	0	7	3	8	9	0	12/17/91	Peter J. Danielsen	370	58.2	12/30/88
	A.C	5	1	1	7	4	9	6	05/26/92	Stearns et al.	395	700	05/23/88
	A.D	5	1	5	5	7	6	3	10/13/92	Bigus et al.	379	113	12/11/90
	A.E	5	2	2	6	1	7	6	07/06/93	Westaway et al.	395	800	08/20/90
	A.F	5	2	3	5	6	4	2	08/10/93	Wobber et al.	380	25	07/21/92
	A.G	5	2	4	1	6	2	1	08/31/93	Ronald G. Smart	395	51	06/26/91
	A.H	5	2	7	6	7	6	8	01/04/94	James L. Bander	395	10	03/20/91
	A.I	5	3	0	1	3	2	0	04/05/94	McAtee et al.	395	650	06/28/91
	A.J	5	3	1	7	6	8	8	05/31/94	Ralph T. Watson et al.	395	161	02/26/93
	A.K	5	3	2	5	5	2	8	06/28/94	Johannes Klein	395	650	04/22/93

FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS							
	DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION (YES/NO)	
	A.L	WO9321586	10/28/93				
	A.M	WO9500907	01/05/95				
	A.N	WO9502217	01/19/95				
	A.O	WO9511560	04/27/95				
	A.P	WO9515635	06/08/95				
	A.Q	2061117	02/12/92	Application for Canadian Patent			

OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)	
A.R	Gilbert et al., "IBM Intelligent Agents", <a href="http://www.networking.ibm.com/iag/iagwp1.htm1">http://www.networking.ibm.com/iag/iagwp1.htm1</a> , (1996).
A.S	"Commercial Expert System Shells", <a href="http://www.ioe.ac.uk/hgm/expert3.html">http://www.ioe.ac.uk/hgm/expert3.html</a> , (1997).
A.T	"Commercial Software Packages for Neural Network Simulation", <a href="ftp://ftp.sas.com/pub/neural/FAQ6.html">ftp://ftp.sas.com/pub/neural/FAQ6.html</a> , (1997).

EXAMINER	DATE CONSIDERED
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	B.A	5	3	2	9	6	2	6	07/12/94	Klein et al.	395	375	10/23/90
	B.B	5	3	6	7	4	5	4	11/22/94	Kawamoto et al.	364	419.20	06/25/93
	B.C	5	3	6	7	6	3	5	11/22/94	Bauer et al.	395	200	08/29/91
	B.D	5	3	7	1	8	8	9	12/06/94	Johannes Klein	395	650	04/22/93
	B.E	5	3	9	2	3	4	5	02/21/95	Mary R. Otto	379	265	04/30/93
	B.F	5	3	9	8	0	1	2	03/14/95	Jeffrey H. Derby et al.	340	825.03	11/24/92
	B.G	5	4	0	8	4	7	0	04/18/95	Lewis V. Rothrock et al.	370	62	10/14/93
	B.H	5	4	2	1	0	1	3	05/30/95	Curtis A. Smith	395	650	07/08/93
	B.I	5	4	2	3	0	4	3	06/06/95	Fitzpatrick et al.	395	700	01/21/94
	B.J	5	4	6	5	2	8	6	11/07/95	Clare et al.	379	34	05/24/94
	B.K	5	4	6	9	5	6	2	11/21/95	Christian D. Saether	395	182.18	06/26/92
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		DOCUMENT NUMBER							PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION (YES/NO)
	B.L	EP0519109A1							12/23/92	European			Yes
	B.M	EP0589249A2							03/30/94	European			Yes
	B.N	EP0598534A1							05/25/94	European			Yes
	B.O	EP0611210A1							08/17/94	European			Yes
	B.P	JP3195141							1991	Japan			Yes
	B.Q	JP4157944							1992	Japan			Yes
OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)													
	B.R	A.D. Kwok et al., "A Development System for Intelligent Agent Manufacturing Software", <i>Integrated Manufacturing Systems</i> , 1994, Vol. 5 No. 4/5, pp.64-76.											
	B.S	Barbara Hayes-Roth, "An architecture for adaptive intelligent systems", <i>Artificial Intelligence</i> , January 1995, Volume 72, Numbers 1-2, pp. 329-365.											
	B.T	Siegfried R. Bocionek, "Agent systems that negotiate and learn", <i>International Journal of Human-Computer Studies</i> , March 1995, Volume 42, No. 3, pp. 265-288.											
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	C.A	5	4	8	1	7	1	5	01/02/96	Hamilton et al.	395	700	12/15/93
	C.B	5	4	8	1	6	9	9	01/02/96	Christian D. Saether	395	182.13	03/23/95
	C.C	5	6	0	3	0	3	1	02/11/97	White et al.	395	683	07/08/93
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	C.K												

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	C.L	JP4256101	1992	Japan			No
	C.M	JP5324009	1993	Japan			No
	C.N	JP6175944	1994	Japan			Yes
	C.O						
	C.P						
	C.Q						

OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)	
	C.R Darrell Woelk et al., "Uncovering the next generation of active objects", <u>OBJECT</u> magazine, July/August 1995, pp. 32-40.
	C.S Jan Ozer, "Totally Streaming Multimedia", <u>CD-ROM Professional</u> , August 1996, Volume 9 No. 8, pp. 54-66.
	C.T Barbara Hayes-Roth et al., "A Domain-Specific Software Architecture for Adaptive Intelligent Systems", <u>IEEE Transactions on Software Engineering</u> , April 1995, Vol. 21, No. 4, pp. 288-301.

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OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)	
	D.R    Glenn R. Stearns, "Agents and the HP NewWave Application Program Interface", <u>Hewlett-Packard Journal</u> , August 1989, pp. 32-37.
	D.S    T.J. Grant, "A review of Multi-Agent Systems techniques, with application to Columbus User Support Organisation", <u>Future Generation Computer Systems</u> , May 1992, Volume 7, Number 4, pp. 413-437.
	D.T    Mufit Ozden, "Intelligent Objects in Simulation", <u>QBSA Journal on Computing</u> , Fall 1994, Vol. 6, No. 4, pp. 329-341.

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OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)		
	E.R	Peter Gibbons et al., "Intelligent Agents in Multi-Media Systems", <u>Sharp Technical Journal</u> , December 1994, Volume 60, pp. 11-14.
	E.S	Cristano Castelfranchi, "Guarantees for Autonomy in Cognitive Agent Architecture", <u>Proceedings of ECAI-94 Workshop on Agent Theories, Architectures, and Languages</u> , Amsterdam, The Netherlands, August 8-9, 1994, pp. 56-70.
	E.T	Devindra Weerasooriya et al., "Design of a Concurrent Agent-Oriented Language", <u>Proceedings of ECAI-94 Workshop on Agent Theories, Architectures, and Languages</u> , Amsterdam, The Netherlands, August 8-9, 1994, pp. 386-401.

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OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)		
	F.R	Agostino Poggi, "DAISY: an Object-Oriented System for Distributed Artificial Intelligence", <u>Proceedings of ECAL-94 Workshop on Agent Theories, Architectures, and Languages</u> , Amsterdam, The Netherlands, August 8-9, 1994, pp. 341-354.
	F.S	David Kinny et al., "Planned Team Activity", <u>4th European Workshop on Modelling Autonomous Agents in a Multi-Agent World</u> , MAAMAW '92, S. Martino al Cimino, Italy, July 29-31, 1992, pp. 227-256.
	F.T	Stephen Marsh, "Trust in Distributed Artificial Intelligence", <u>4th European Workshop on Modelling Autonomous Agents in a Multi-Agent World</u> , MAAMAW '92, S. Martino al Cimino, Italy, July 29-31, 1992, pp. 94-112.

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09/100,595INFORMATION DISCLOSURE  
STATEMENT BY APPLICANTAPPLICANT  
Joseph Phillip Bigus et al.

(Use several sheets if necessary)

FILING DATE  
June 19, 1998GROUP  
2762

(37 CFR 1.98(b))

## U.S. PATENT DOCUMENTS

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	G.A						
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## OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

	G.R	Beerud Sheth et al., "Evolving Agents For Personalized Information Filtering", <u>Proceedings of the Ninth Conference on Artificial Intelligence for Applications</u> , Orlando, Florida, March 1-5, 1993, pp. 345-352.
	G.S	Tremaine A.O. Cornish et al., "What Has Mill to Say about Data Mining", <u>Proceedings of The 11th Conference on Artificial Intelligence for Applications</u> , Los Angeles, California, February 20-23, 1995, pp. 347-353.
	G.T	Siegfried Bocionek, "Software Secretaries: Learning and Negotiating Personal Assistants for the Daily Office Work", <u>Proceedings of IEEE Int'l. Conf. on Systems, Man and Cybernetics</u> , San Antonio, Texas, Oct. 2-5, 1994, Vol. 1, pp. 7-12.

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OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)		
	H.R	Enrique D. Espinosa, "Intelligent Classroom Information Agent Multimedia Lab & Visual Guides for Datastructures II", <i>Proceedings of the Int'l. Conf. on Multimedia Computing and Systems</i> , Washington, D.C., May 15-18, 1995, pp. 302-305.
	H.S	Rolf Pfeifer et al., "Distributed Adaptive Control: A Paradigm for Designing Autonomous Agents", <i>Toward a Practice of Autonomous Systems, Proceedings of the First European Conf. on Artificial Life</i> , Paris, France, Dec. 1991, pp. 21-30.
	H.T	Alison Cawsey et al., "A Comparison of Architectures for Autonomous Multi-Agent Communication", <i>Proceedings of the 10th European Conference on Artificial Intelligence</i> , Vienna, Austria, August 3-7, 1992, pp. 249-251.

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	I.R	Paul Kearney et al., "Emergent Behaviour in a Multi-Agent Economic Situation", <u>Proceedings of the 11th European Conference on Artificial Intelligence</u> , Amsterdam, The Netherlands, August 8-12, 1994, pp. 284-288.					
	I.S	Wayne Wobcke, "Reasoning about Action from the Perspective of Situation Semantics, <u>Proceedings of the 6th Australian Joint Conference on Artificial Intelligence</u> , Melbourne, Australia, November 16-19, 1993, pp. 71-76.					
	I.T	Gunilla A. Sundstrom et al., "Cooperative Human-Computer Decision Making: An Experiment and Some Design Implications", <u>Proceedings of the Human Factors and Ergonomics Society 38th Annual Meeting</u> , Nashville, Tennessee, October 24-28, 1994, pp. 220-224.					
EXAMINER				DATE CONSIDERED			
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SUBSTITUTE FORM PTO-1449 (MODIFIED)  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (37 CFR 1.98(b))	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. IBM/04B (R0996-052L)	SERIAL NO. 09/100,595
	APPLICANT Joseph Phillip Bigus et al.		
	FILING DATE June 19, 1998	GROUP 2762	

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	J.A						
	J.B						
	J.C						
	J.D						
	J.E						
	J.F						
	J.G						
	J.H						
	J.I						
	J.J						
	J.K						

## FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION (YES/NO)
	J.L						
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	J.P						
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## OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

J.R	T. Moody, "AT&T Personalink (SM) - A Public Network for Smart Agent Pics", <u>IEE Colloquium on Roaming with Data</u> , London, UK, March 6, 1995, Digest No. 1995/046.
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	K.T

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